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Dual Use Technology Programs

5 & 15 June 2006



SUPERIOR TECHNOLOGY



FOR A



SUPERIOR ARMY



RDECOM

TACOM
The Soldier and Ground Systems
Life Cycle Management Command

TARDEC
U.S. ARMY TANK AUTOMOTIVE RESEARCH, DEVELOPMENT AND ENGINEERING CENTER

Agenda

- TARDEC Intro
- Cooperative Research and Development Agreements (CRADA)
- Small Business Innovation Research (SBIR)
- TACOM Acquisition Center (Contracting office)
- Q & A



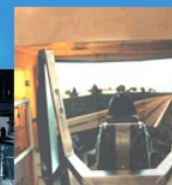


MISSION

To research, develop, engineer, leverage and provide advanced systems integration of technology into ground systems and support equipment throughout the life cycle.



SUPERIOR TECHNOLOGY



FOR A



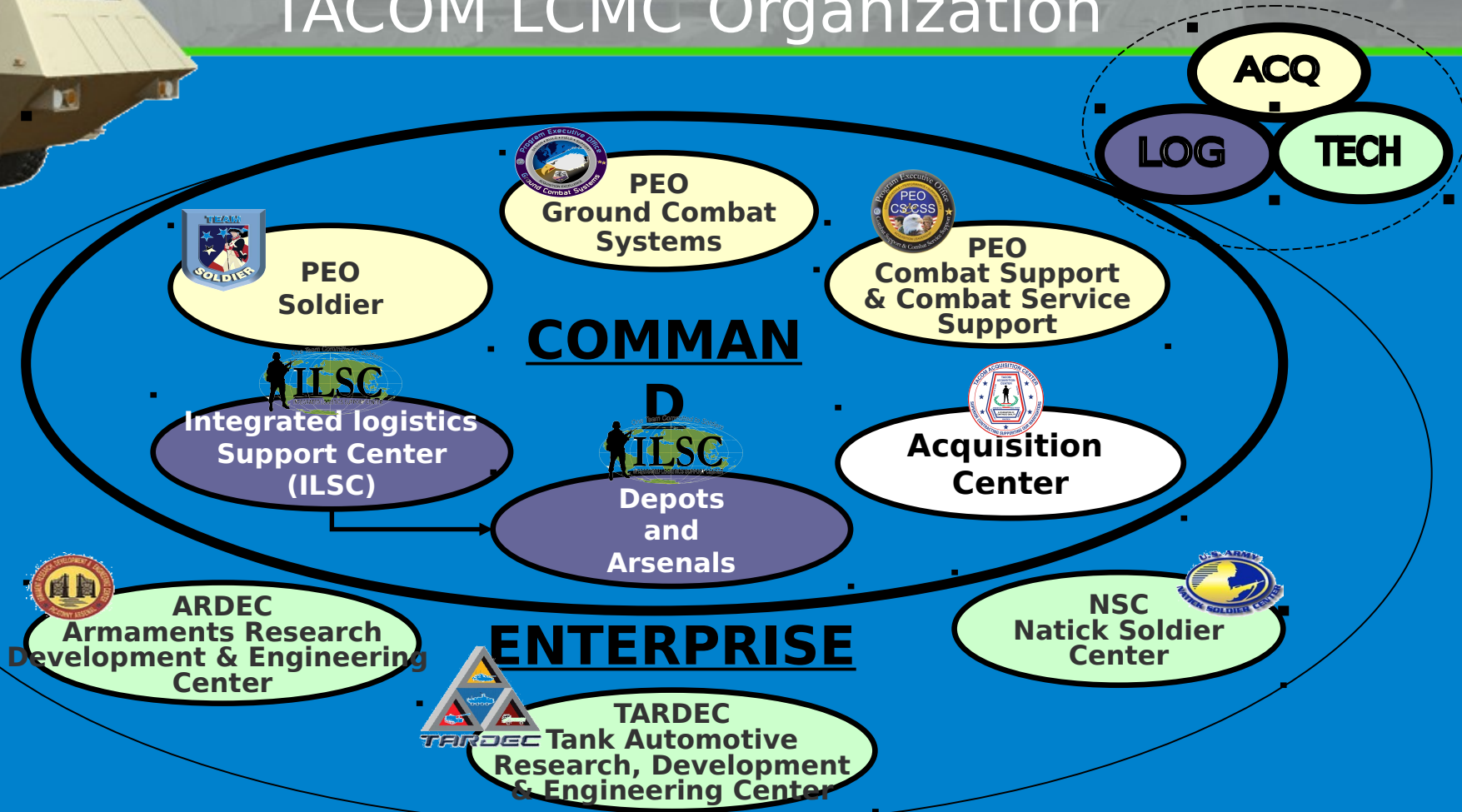
SUPERIOR ARMY



TARDEC
U.S. ARMY TANK-AUTOMOTIVE RESEARCH DEVELOPMENT AND ENGINEERING CENTER

<http://www.tacom.army.mil/tardec/>

TACOM LCMC Organization



The TACOM LCMC integrates Army Acquisition, Logistics, and Technology (ALT) responsibilities, authorities, and processes to provide the best possible support to warfighters and one voice to the customer.



SEVEN PRINCIPAL PRODUCT LINES

SUPERIOR TECHNOLOGY FOR A SUPERIOR ARMY



LOGISTICS EQUIPMENT



COUNTERMINE



MILITARY BRIDGING



FUELS & LUBRICANTS



**WATER GENERATION
& PURIFICATION**



COMBAT & TACTICAL VEHICLES



**FUEL STORAGE
& DISTRIBUTION**

TARDEC

U.S. ARMY TANK AUTOMOTIVE RESEARCH, DEVELOPMENT AND ENGINEERING CENTER





STATE OF THE ART LABS

SUPERIOR TECHNOLOGY FOR A SUPERIOR ARMY

ADVANCED COLLABORATIVE ENVIRONMENTS

ADVANCED CONCEPTS LAB

ADVANCED MATERIALS &
MANUFACTURING CENTER

BRIDGING

PHYSICAL PROTOTYPING

ROBOTICS

CREW STATION & EMBEDDED SIMULATION

PROPULSION

FUELS & LUBRICANTS

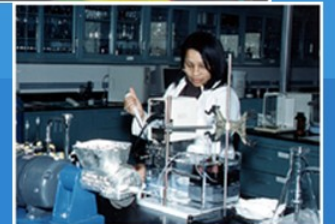
TRACK & SUSPENSION

WATER

LASER PROTECTION

ELECTRONICS ARCHITECTURE

NEXT GENERATION SOFTWARE



TARDEC

U.S. ARMY TANK-AUTOMOTIVE RESEARCH DEVELOPMENT AND ENGINEERING CENTER



DUAL NEEDS FOCUS

SUPERIOR TECHNOLOGY FOR A SUPERIOR ARMY



TARDEC

U.S. ARMY TANK-AUTOMOTIVE RESEARCH DEVELOPMENT AND ENGINEERING CENTER





TARDEC/NAC office at Automation Alley





CRADA

Cooperative Research And Development Agreement





CRADA Program History & Law

- Created by the Federal Technology Transfer Act of 1986
- Extends to all government-owned laboratories
- Defined in U.S. Code, Title 15, Section 3710a
- Not a procurement contract; Federal Acquisition Regulations do not apply



CRADA - Overview

- Between Government Laboratories and commercial, academic, government or association partners;
- Facilitate technology transfer between the parties;
- Help to improve U.S. competitiveness;
- Partner contributes personnel, services, property and funding; Government contributes all the above, except funding.



CRADA - Features & Benefits

- **Quick** - Typically established within 60 days of initiation.
- **Flexible** - Leveraging of resources; each party pays for their tasks under flexible Statement of Work (SOW).
- **Mutually Beneficial** - Encourages cooperative R&D; industry interests and technology transfer; partner has option to license technology Army invents under the CRADA.
- **Safe** - Proprietary information protected; all intellectual property developed under CRADA belongs to inventing party.
- **Simple** - Conditions and basic rights set forth in clear and simple language. There are no matching funds mandated under a CRADA.



CRADA - Miscellaneous

- **Duration** - Typically 3 years; renewable.
- **Termination** - Upon expiration, by mutual consent, or unilaterally (with written notice).
- **Multiple CRADAs** - A partner may have more than one CRADA with TARDEC simultaneously.
- **Special Agreements**
 - Master Agreement: many SOW's under one contract
 - 3-way: more than one partner
 - Foreign partner: requires approval from trade rep.



CRADA - Current Agreements

Alberici Constructors

Altair Engineering

American Trucking Assoc.

Automation Alley

Columbia University

Dana Corp.

Delphi

Detroit Public Schools

Drive Dynamics LLC

DTE

Eaton Corp.

FiberForm, Inc.

General Dynamics Land Systems

General Motors Corp.

Hybra-Drive Systems

Ibis Tek

International Truck

Intrepid World Communications

Jadi

Kettering University

Kuchera Defense Systems

Link Testing Labs

LMS North America

Macomb County (MI)

Mirror Lite Company

MotorCities Nat'l Heritage

Nartron Corp.

National Biodiesel Board

National Center for Mfg Sciences

NextEnergy

Oakland County (MI)

Precision Combustion

PREDICT

RaeBeck Automotive

SiNeramics

Smiths Aerospace

TeraBurst Networks

United Defense

U.S. FIRST

Waltonen Engineering

Wayne County (MI)

Wayne State University



CRADA - Info Tri-Fold

TARDEC
Focus

TARDEC's mission is to research, develop, engineer, leverage and integrate advanced technology into ground systems and support equipment throughout the life cycle.

TARDEC is focused on partnering with our customers, industry and academia to harness new technologies for emerging systems, reduce operating and maintenance costs of fielded systems, and assure that our soldiers have the best performing, most reliable, and easiest to maintain ground vehicles in the world.

Information

**U. S. Army TARDEC
National Automotive
Center**

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Warren, Michigan
48397-5000**

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SUPERIOR TECHNOLOGY FOR A SUPERIOR ARMY

UNITED STATES ARMY
TARDEC
TANK AUTOMOTIVE RESEARCH, DEVELOPMENT AND ENGINEERING CENTER

**Cooperative
Research And
Development
Agreement
(CRADA)
Program**

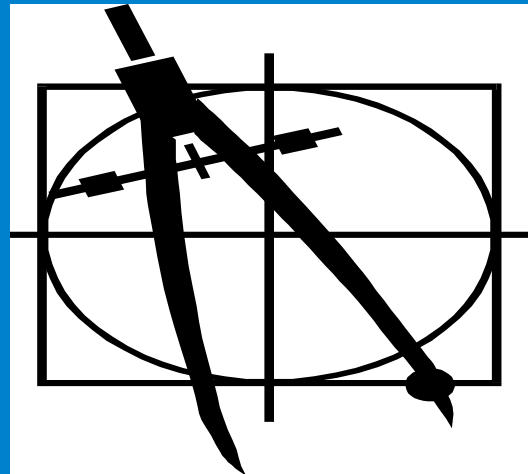
mi  my.mil

RDECOM TACOM
The Office and Center for Tank and Ground Vehicle Development



SBIR

Small Business Innovation Research (SBIR)



**Successfully Transferring New
Technology
from Concept to Market**



SBIR

Small Business Innovation Research Program (SBIR) - Definition:

- An Extramural Program Reserved for Small Business
- Set-aside program for small business concerns to engage in federal R&D -- with potential for commercialization.



SBIR Program History & Law

Why SBIR?

Small Business Innovation Development Act of 1982
Congress designated 4 major goals

- **Stimulate technological innovation.**
- **Use small businesses to meet Federal R & D needs**
- **Foster & encourage participation by socially and economically disadvantaged small businesses.**
- **Increase private sector commercialization of innovations derived from Federal R & D, thereby increasing competition,**



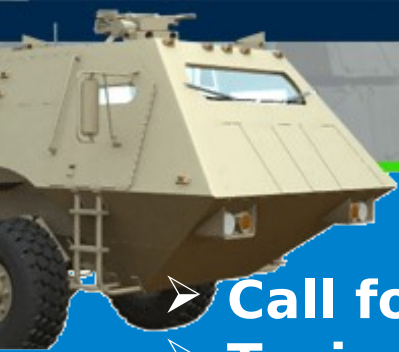
SBIR Program History & Law

- **Government-wide Program established by Congress in 1982 to promote small business participation in Federal Research and Development (R&D)**
- **P.L. 102-564; Signed 10/28/92. The SBIR R&D Enhancement Act of 1992 extended the SBIR Program until Oct 2000.**
- **P.L. 106-554; Signed 12/21/00. The Act HR 5667 of December 2000 extended the Program until 2008.**
- **DOD SBIR Program administered in accordance with Small Business Administration (SBA) SBIR Policy Directives**



SBIR - Benefits

- **Serves Army R&D needs by identifying and funding innovative projects proposed by the small business community**
- **Allows Army Labs & RDECs to tap into advanced technologies of small firms**
- **Dual use technologies**
- **DoD funds feasibility studies and R&D of innovative technologies**
- **Industry develops & markets new products**
- **Visit www.acq.osd.mil/sadbu/sbir for more details**



SBIR - Cycle

- **Call for topics**
- **Topic review (Local Command/Army/DoD)**
- **Topic selection**
- **Solicitation pre-release**
- **Solicitation opens (discussion & preparation of new proposals)**
- **Solicitation closes (proposals submission)**
- **Phase I proposal evaluations**
- **Phase I recommendations/selections for awards**
- **Negotiate/award Phase I contracts (6 month performance)**
- **Invite performers to submit Phase II proposal**
- **Phase II proposal evaluations**
- **Phase II recommendations/selection for awards**
- **Exercise Phase I option (4 month performance)**
- **Negotiate/award Phase II contracts (2-year performance)**
- **Phase III - Commercialization**



SBIR - Features

**Current Army solicitation announced on Web 1
MAY 2006**

PHASE I

<http://www.acq.osd.mil/sadbu/sbir/solicitations/sbir062/index.htm>

**Feasibility Study
\$100K and 6 months (Army \$70K)
(Army \$50K Option)**

PHASE II

Full R/R&D

**2 - Year Award and \$750K (Army
\$730K)**

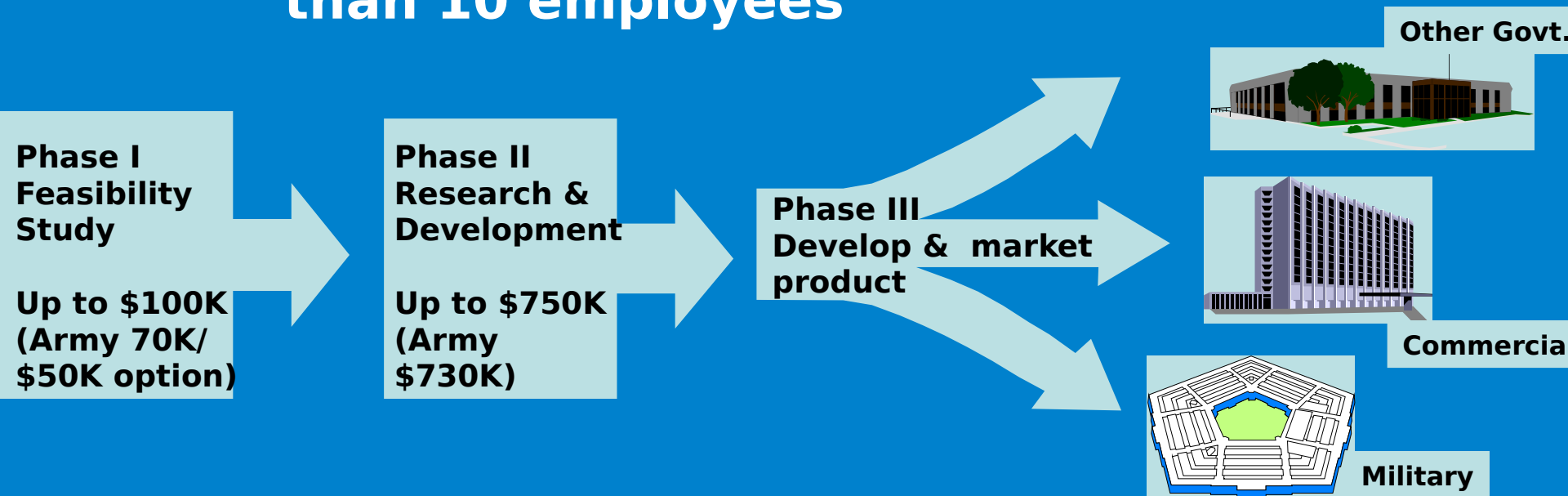
PHASE III

**Commercialization Stage
Use of non-SBIR Funds**



SBIR Program

- Uses a three-phase approach, involving projects of innovative technology application, and high technical risk
- Army only participates in the annual Spring solicitation
- Most SBIR Participants are firms of fewer than 10 employees





SBIR Program - Fast Track

Incentive Program

- Accelerated Phase II process for Phase I contractors with investors matching Phase II SBIR funding
- Provides incentive to build strategic partners for Phase III investment and marketing as early as Phase I
- Benefits of the process:
 - Interim funding up to \$50,000 between Phase I and II
 - Expedited Phase II evaluation, selection and award
- Qualifications:
 - Fast Track application 120 days after Phase I award
 - Independent investor commitment for funds in cash
- Matching Rates: 4:1 matching-new firms, 1:1 others

Visit <http://www.acq.osd.mil/sadbu/sbir/fasttrack/index.html>



SBIR Program - Phase II Plus

Incentive Program

- **Phase II enhancement program**
 - **Further extend the transition of R&D efforts into Army acquisition as well as the private sector**
 - **Accelerate the Phase II project into Phase III**
- **SBIR matching third-party funds up to \$500k**
- **Extension of Phase II project up to one year**
- **Applications 3 months prior to the end of Phase II**

Visit *http://www.aro.army.mil/arowash/rt/sbir/sbir_phaseii*



SBIR Program - Time Table

PHASE I

Topic Generation(TARDEC)	OCT-DEC 2005
Topic Generation(Army-DoD)	DEC 2005 - APR 2006
Topic Pre-release on Web	01 MAY 2006
Solicitation Opens	14 JUN 2006
Solicitation Closes	14 JUL 2006
Proposal Evaluation	JUL - SEP 2006
Negotiate Contracts	OCT - NOV 2006



SBIR Program - Time Table

PHASE II

Invite Proposals	06 MAR 06
Proposals Due	05 APR 06
Proposal Evaluations	mid APR - end MAY
06	
Phase II Selection	mid JUN 06
Phase I Option Exercised	mid JUN 06
Negotiate Contracts	JUN - SEP 06



SBIR - Eligibility and Limitations

Must qualify as small business for research as defined below:

- **Organized for profit, with a place of business located in the United States**
- **At least 51 percent owned and controlled by one or more individuals who are citizens of, or permanent resident aliens in, the United States, or at least 51 percent owned and controlled by another business concern that is at least 51 percent owned and controlled by one or more individuals (citizens or permanent residents of the U.S)**
- **Has, including its affiliates, not more than 500 employees**



SBIR - Tips

Things to remember:

- DoD's SBIR 2006.2 Solicitation available in HTML, PDF and MS WORD formats on the web at:

<http://www.acq.osd.mil/sadbu/sbir/solicitations/sbir062/index.htm>

- Officially opens on 6/14/06 and proposals will be due (at DoD) by 6:00 AM EST on 7/14/06
- The DoD topics search Web site can be found at: ***<http://www.acq.osd.mil/sadbu/sbir>***



SBIR - Tips (cont'd)

Things to remember:

- **Pre-Solicitation opened 1 May 06. Speak directly to topic authors or submit questions on SITIS (SBIR-Interactive Topic Information System).**
- **Once solicitation begins, 14 Jun 06, questions may only be submitted through SITIS.**
- **SITIS will cease accepting questions two weeks prior to the solicitation close date .**
- **Before you submit a proposal check SITIS even if you don't need to ask a question; you should view your competitor's questions and the DoD's answers at:**



SBIR - Tips (cont'd)

Things to remember:

- **ALL SBIR offerors MUST register electronically via the Web at:
<http://www.dodsbir.net/submission/>**
- **Via the same Web site you will submit:**
 - a) DoD Proposal Cover Sheet (cover and summary abstract),**
 - b) ENTIRE Technical Proposal with any appendices,**
 - c) Cost Proposal, and the**
 - d) Company Commercialization Report**



SBIR - Tips (cont'd)

Things to remember:

- **DoD requires proposals submitted in PDF format only.**
- **DoD Help Desk Phone: 866-SBIRHLP (866-724-7457)**
- **A facility to submit e-mail questions can be found at <http://www.dodsbir.net/helpdesk/>**



SBIR - Tips (cont'd)

Things to remember:

Phase I options:

- **Allowed by Army (up to \$50K)**
- **Should be fully costed separately from the Phase I (base) approach**
- **Should have separate work plan from Phase I**
- **Both cost proposal and work plan needs to be part of Phase I proposal**

SBIR - Info Tri-Fold

TARDEC Focus

The mission of the **Tank-Automotive Research, Development, & Engineering Center (TARDEC)** is to research, develop, engineer, leverage and integrate advanced technology into ground systems and support equipment throughout the life cycle. TARDEC is focused on partnering with customers, industry and academia to harness new technologies for emerging systems, reduce operating and maintenance costs of fielded systems, and assure that our soldiers have the best performing, most reliable, and easiest to maintain ground vehicles in the world. The SBIR Program solves critical problems through the innovative talents of small businesses. It provides opportunities to high-tech companies and research institutes to participate in government-sponsored R&D efforts in key technology areas. The SBIR Program specifically seeks out those companies interested in automotive technologies that will contribute to the Army's mission and have potential commercial applications. The Program begins with establishing feasibility and technical merit and ends with the integrating of a product into Army programs and/or the commercial market. Requirements on how to

Information

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National Automotive
Center**

AMSRD-TAR-N/MS 289

**Warren, Michigan
48397-5000**

www.tacom.army.mil/tardec/

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Martin Novak, 586-574-8730

SITIS home page: **www.dodsbir.net/sitis**

Army home page:

novakm@tacom.army.mil

www.aro.army.mil/arowash/rt/

DoD help desk: 866-724-7457 (8am to 5pm EST)



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**Small
Business
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RDECOM

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The Soldier and Ground Systems
Life Cycle Management Command

TARDEC



SBIR & CRADA Points of Contact

TARDEC point of contact for CRADA:

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